DOCUMENT RESUME

ED 327 224 JC 910 035

AUTHOR Jones, Sylvester L.
TITLE The Development and Implementation of an Open-Entry/Open-Exit Competency-Based Individualized Nursing Assistant Program.
PUB DATE Nov 90
NOTE 58p.; M.S. Practicum, Nova University.
PUB TYPE Dissertations/Theses - Practicum Papers (043)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Academic Persistence; Access to Education; *Allied Health Occupations Education; *Competency Based Education; Dropouts; *Educational Certificates; Educational Strategies; *Low Income Groups; *Nurses Aides; Postsecondary Education; Program Descriptions; *School Holding Power; Skill Centers; Student Attitudes; Student Attrition

ABSTRACT

In an effort to increase retention rates among nursing assistant program students, an open-entry/open-exit competency-based individualized program was implemented in 1990 at a small vocational skills center serving low-socioeconomic adult students. This change was instituted in response to a growing drop-out rate and to difficulties expressed by both students and potential students concerning the traditional program format which required completion of the required courses within one trimester. The individualized system had the following characteristics: open-entry and open-exit; variable learning time; credit granted for work completed; evaluation based on performance; and fixed program content. Class attendance data were collected for the 3-month period prior to program implementation and for the 3-month period after the new program was instituted. A comparison of the two periods produced the following findings: (1) enrollment increased over 107% during the 3-month period following implementation of the competency-based program; (2) enrollment during the 3-month period prior to program implementation showed a decrease of 44%; (3) while traditional enrollees had a 44% dropout rate, there were no dropouts recorded during the first three months of the new program; and (4) the program graduation rate increased by 87.5% after implementation of the competency-based phase. Tables provide longitudinal data on the nurse assistant program dropout rate, and the percentage change in dropout rate for each trade. Skills task lists from the nursing assistant program are appended. (JMC)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ED327224

# THE DEVELOPMENT AND IMPLEMENTATION OF AN OPEN-ENTRY/OPEN-EXIT COMPETENCY-BASED INDIVIDUALIZED NURSING ASSISTANT PROGRAM

by

SYLVESTER L. JONES

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

S. L. JONES

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☒ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

A Practicum Report

Submitted to the Faculty of the Center for the Advancement of Education at Nova University in partial fulfillment of the requirements for the degree of Master of Science.

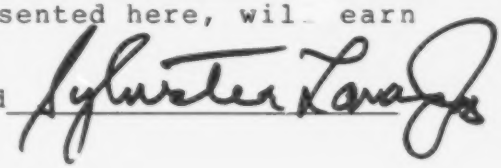
The abstract of this report may be placed in a National Database System for reference.

NOVEMBER/1990

JC 910035

AUTHORSHIP STATEMENT

I hereby testify that this paper and the work it report are entirely my own. Where it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholorship of other workers in the field and in the hope that my work, presented here, will earn similar respect.

Signed 

ABSTRACT

The Development and Implementation of an Open-Entry/ Open-Exit Competency-Based Individualized Nursing Assistant Program.
Jones, Sylvester L., 1990. Practicum Report, Nova University, The Center for the Advancement of Education.
Descriptors: Adult Education/ Adult Learning/ Adult Programs/ Competency-Based Education/ Individualized Instruction/ Learning Activities/ Nursing Education/ Programmed Instructional Materials/ Open-Entry,Open-Exit Program/ Teaching Methods/ Traditional Approach/ Vocational Education/ Vocational Schools/

The implementation of a different teaching strategy was addressed in order to alleviate the problem of losing students in the skill center's nursing assistant program. A Competency-Based Open-Entry/Open-Exit Approach was utilized instead of the Traditional Approach. The "new" teaching strategy successfully achieved several major objectives: increased enrollment, positive attitudinal and motivational change, and increased graduation rate of the targeted students. The Competency-Based Open-Entry/Open-Exit Program allowed the targeted students to work at their own pace using a variety of learning resources. The overall results of this teaching approach allowed the administrators of this skill center to conclude that all prospective courses will be taught similar to this program outlined in the author's practicum. Appendices include Nurse Assistant Program--Dropout Rate (graph), Percentage Change in Dropout Rate for each Trade (chart), Nurse Assistant's Task Listings.

Table of Contents


| | Page |
|---|---|
| Title Page | i |
| Authorship Statement | ii |
| Abstract | iii |
| Observer's Verification.....(not included) | iv |
| Chapters | |
| I. Purpose | 1 |
| II. Research and Solution Strategy | 13 |
| III. Method | 31 |
| VI. Results | 39 |
| V. Recommendations | 44 |
| Reference List | 45 |
| Appendices | |
| Appendix A: Nurse Assistant Program--Dropout Rate | 47 |
| Appendix B: Percentage Change in Dropout Rate for each Trade | 48 |
| Appendix C: Nurse Assistant's Task Listings | 49 |

# Chapter I

## PURPOSE

### School and Community Setting

The school in which this practicum will take place is a small vocational skill center. It is located in a predominately Black community that suffers the despair and frustration of minorities who have been battered by the vagaries of growth, overrun by developmental pressures and subjected to obvious discriminations. It is, however, one of the oldest neighborhoods in the city that grew into a vibrant community. Large economic ventures were undertaken by black residents and these developments thrived. The population of this community continued to expand until the early 1960's. Desegregation, Urban Renewal, the Neighborhood Development Program, and construction of two major expressways and Metrorail significantly altered the character of the neighborhood. Residents were scattered and relocated. Economic, physical and social decay became more pronounced.

There is a resurgence in this community today. The future of this community will be culturally and economically secure and socially stable as new development projects are realized. New developments on

the horizon include condominiums and townhouses, housing rehabilitation, a community center, a satellite health clinic, new businesses, and a new supermarket. The reconstruction of the community's junior high school into a hi-tech, state-of-the-art education facility was recently completed.

The skill center has been in operation for more than thirteen years and serves low-socioeconomic adult students who desire vocational preparatory training. The term "low-socioeconomic" adults refers to adults who fall basically into such areas as: the unemployed, school dropouts, adults who are from low income backgrounds and are often the head of a household.

The faculty of the skill center actively recruit students from throughout the community and works closely with community-based organizations, businesses and industry, offering training and workshops to meet their own specific needs. In addition, the school implemented a variety of programs at various satellite locations and made a joint commitment to work with At-Risk students. During the 1987-88 school year, over 500 students were enrolled through these joint efforts.

The skill center has vocational training programs in business, building maintenance, welding, auto mechanics and nursing assistant. All of these programs have been in operation since the school opened, with the exception of its Nursing Assistant Program. This program became operational three years ago. It was integrated into the school's curriculum for two reasons. First, it gave an immediate increase in the school's student population. And second, the school needed to offer the people of the community a certificate program that did not require a high school diploma and/or General Equivalency Diploma upon completion of training. Many adults who are residents of this area are without a high school diploma.

Having been employed at this vocational school for five years as a business education instructor, the author of this practicum was recently nominated by the principal and appointed by the county school system's health department as a Sex Equity Resource Specialist for the Sex Equity Linkage and Coordination Project on a part-time basis, working in conjunction with five other county-wide appointed members.

The major duties of this position include:

1. Working cooperatively with project and secondary school staff for the purpose of promoting activities regarding sex equity in Vocational Education Programs.
2. Disseminating information regarding nontraditional occupations to teachers, students and administrators.
3. Chairing an Equity Committee comprised of respective secondary feeder school equity representatives for the purpose of developing strategies designed to recruit females and males into nontradional careers.
4. Serving as facilitator in school-based workshops designed to recruit students to enroll in nontraditional courses.
5. Performing other activities as assigned.

The above tasks are coordinated and supervised by the school system's vocational health department. Although currently working as a business education instructor, the author has a previous working background in health-related fields.

The author also served in middle management positions for a large city health department. Among

the duties performed were: coordinating drug program services, reviewing patients' records, serving as a liaison with patients of all drug programs and preparing annual reports for contract agencies. Experience has also included work in an administrative capacity for two nonprofit organizations which operated the largest drug abuse programs in the northeast section of the United States.

Problem Statement

The Nursing Assistant Program is a short-term vocational class that is approximately one trimester. This program was added to the school's curriculum primarily to serve unemployed residents of the community. Many individuals are high school dropouts and lack vocational training. The Nursing Assistant Program allows students to enter and to achieve a certificate with little formal education.

Due to the school's program length, including the starting and ending time frame, the school is having a problem preparing students for a skill in the Nursing Assistant Program. The reason for this problem is due to the program's traditional setting. In other words, traditionally, the time-frame in which the school offers, operates and completes its nursing classes is

done on a trimester basis. All students must begin their coursework in either September, January or April. Subsequently, all students must complete the program at the end of each trimester. Students, therefore, start at one given point and must finish at a given point. Once the course starts, potential clients who want to enroll must go on a waiting list. When this occurs, unfortunately, many intended clients continue to lose the opportunity of a valuable training career. Wircenski (April 1989), states that:

> traditional educational programs and services will not meet the needs of disadvantaged adults; the problems they face are often too much to cope with and still succeed in educational endeavors.

Our school's admission office records show that 38 students were accepted into the Nursing Assistant Program in the 1988-89 school year. Using our traditional method of enrolling students, this meant that all students started at the beginning of a trimester and completed at the end of the trimester. However, during that year an additional 60 potential students showed an interest in the nursing assistant program. These were potential clients who were eager to learn, had made arrangements with family members to attend school and were career ready. Forty-five of the

potential students were not able to enroll because the program had already started. The other fifteen students did not take part for other reasons. All students who qualify for this program should be served. Had an open-entry/open-exit competency-based nursing assistant program been established, these potential students could have been served.

The waiting list is clear evidence of the difficulty the school is having preparing students for a skill in its Nursing Assistant Program. Once the potential and/or prospective clients have been put on a waiting list, they become lost during this waiting period. Our follow-up records indicate that many students had moved, lost interest or sought admittance from many private institutions, not being fully aware of the fee structure and other financial obligations involved in such institutions.

The skill center's records indicate that the traditional nursing assistant program has had a continual percentage increase in the dropout rate of students since its inception (Appendix A:47). Also, Table 1 (Appendix B:48) illustrates the percentage dropout rate for the nursing assistant program as compared to other trades. It shows clearly that the

nursing assistant program, overall, dropout rate covering the school's fiscal years 1987-1989, 1988-1989, and 1989-1990 was much higher than the other vocational trades at the skill center during the same fiscal periods.

There is much research evidence which indicates strongly that dropouts, displaced workers and undereducated adults do benefit from school-related job training programs. In most alternative schools or job training classes, students are offered an array of intense services such as: skills training, basic education, personal counseling, referral to other agencies, and the guidance of an adult mentor. For example, there is solid evidence that the Job Corps, the nation's largest training program for dropouts, does help participants find employment. Hahn (1987) noted that:

> those who took part in the Job Corps earned an average of 15 percent more per year than did a similar group of nonparticipants. A higher share of participants also completed high school, entered the military and stayed off welfare programs.

The vocational school has determined that the Nursing Assistant Program is a popular career for many of our potential clients. Since many of our clients did not complete high school, this is one program where

this type of student can succeed. As a result, the staff has involved the Supervisor of Health and Public Services for the county school system and all teachers in the various schools that teach this type of class. It is the intent of this group to come up with a solution to this problem so that this school may better serve the community, increase its enrollment and meet the needs of the potential clients when their interest is at its peak. The teachers within the county would like to see the present program revised to meet these needs.

Outcome Objectives

The goal of this practicum is to revise the program from a traditional program to an open-entry/open-exit competency-based individualized Nursing Assistant Program. As previously mentioned, the Nursing Assistant Program at this school is presently being taught in a traditional setting. The following are the major objectives of this practicum.

Objective 1. Over a period of two months, there will be a significant increase in enrollment by at least 80 percent due to the open-entry/open-exit course design.

No longer will a student have to be put on a "waiting" list for an unreasonable amount of time. Classes will be offered according to student demand and may go on continually all year. The classroom vacancy that occurs when a student exits from the program may be filled immediately by another student waiting to begin.

The means by which this objective would be obtained is simply by comparing the school's nursing classes attendance sheets from the previous two months to the attendance covering the two-month period after the implementation of the new program.

Objective 2. Over a ten-week period under the new program, the targeted students will demonstrate a positive attitudinal desire toward their completion of classroom assignments as evidenced by teacher/author observation. Ultimately, this attitudinal change will result in a significant decrease in student drop-out rate.

In the school's present program, it is clearly documented that, by midway of the course, many of the students (approximately fifty percent) have dropped out of the program. Among the major reasons cited by the students were: (1) personal problems, (2) difficulty

in keeping up with classroom assignments, and (3) classroom pressure from the course itself. This traditional-type program does not and cannot lend itself to individualized attention by the instructor.

The means by which the objective will be determined is the comparing of the monthly drop-out figures of the nursing classes kept by the registrar's office before and after the new program has started.

Objective 3. To increase the graduation rate of the targeted students, at least by seventy-five percent, who take part in a competency-based open-entry/open-exit Nursing Assistant Program during a ten week period.

Based on the previous two objectives, a significant increase in student enrollment and positive attitudinal changes toward classroom activities, there will be a notable increase of students graduating from the nursing classes. As it stands now with the skill center's traditional program, the school allows only so many students to enter the course at the beginning of any given term. Therefore, losing students who have been put on a "waiting" list coupled with the program'sdrop-out rate, there is a significant need to

have such a program (open-entry/open-exit), resulting in a higher number of graduates.

The means by which the author will determine that the expected objective was met will be by comparing the number of completers previously from the traditional program and the number of completers from the competency-based program.

The administrators, teachers, and staff at our facility would like to see the Nursing Assistant Program fulfilling the needs of the community and the school. However, as of yet, nothing has been done. The Nursing Assistant Program at this vocational school should be revised to meet the needs of the students.

## Chapter II

## RESEARCH AND SOLUTION STRATEGY

There are many individualized programs in various academic and vocational areas which have been tested and implemented in numerous school districts throughout the country. The total success of many of these programs is at least questionable. Nevertheless, the postulate of this practicum is to initiate and create strategies and/or solutions to fit the needs of the adult student who, with limited formal education, has a need to become skilled in a nursing trade during a short-time period (16-18 weeks). The emphasis is on the learner and his/her goals. Upon sucessful completion of all required competencies, the underprivileded adult student ultimately will then be ready to merge into today's job market.

Slavin and his colleagues, as cited by Strother (1985), evaluated an individualized mathematics program that was called Team-Assisted Individualization (TAI). Students taking part in this program worked on individualized learning materials in heterogeneous, four-member learning teams. Teammates checked one another's work against answer sheets; tests were scored and materials were distributed by student monitors.

The team received certificates reflecting the number of units completed by their members and the student scores on unit tests.

Since students took responsibility for managing this individualized program, teachers were freed to work with small groups of youngsters who shared specific problems. A teacher spent 10 to 15 minutes with several students from different teams who were having problems with decimals, for example. Then the teacher would send those students back to their teams and bring together another small group to work on another problem area, such as fractions.

In other words, the TAI program confronted the issue of quality in instruction by giving the teacher primary responsbility for doing the teaching. The TAI program motivated students through the use of team rewards, a strategy known to be highly effective in fostering achievement behaviors. The time deficiencies were addressed, in part, by giving students immediate feedback on their work, without any lengthy waits that characterized many earlier programs.

On the practical side, Slavin notes that TAI requires no additional classroom personnel and that the materials cost no more than class-sized set of

mathematics textbooks. Data on the outcomes produced by the TAI suggested that when problems related to management, motivation, and quality of instruction were addressed, individualization can be an effective instructional stragey.

Regardless, whether the program is a conventional (traditional) or an individualized type of program, educators seem to concur that various kind of motivated techniques and the quality of instruction play a paramount role in keeping any level of student in the classroom. A phase of the TAI program mentioned -- individualized learning materials (i.e. learning guides) as well as four-member learning teams would be feasible to employ in an open-entry/open-exit comptency, individualized nursing assistant program.

Frazier (1979) conducted a research project which was intended to determine the effectiveness of the Personalized, Individualized, Vocational Occupations Training (PIVOT) materials developed by the School District of Philadelphia for entry-level competencies in secondary school vocational students. The subject areas selected for the study were industrial electricity, machine shop, and nursing assistant. They were taught in skills centers, comprehensive high

schools, area vocational-technical schools, and special education occupational schools. Experimental classes used the modular PIVOT projectors, while control classes were taught the same subject matter by conventional methods. The rates of success on a criterion task (i.e. the test that the students would be given at the end of the experiment) administered by specialists in each field were compared as an indication of the relative effectiveness of the two methods of instruction. The PIVOT method proved capable of developing entry-level competency in each of the areas and settings examined and the rate of success among the experimental students was not significantly different in any subject area or setting from the rate of success of students taught by conventional methods of instruction.

This implies that the PIVOT method can be considered an alternative method of instruction which results in no loss of benefit to the student, compared to conventional instruction

Due to the minimum admission requirements of the targeted students into the nursing assistant program at the skill center, many students' reading and math levels are not up to grade level. The PIVOT method is

designed to require very little reading on the part of the student. Also, Frazier points out that the PIVOT method has certain intrinsic advantages as a means of indivdualized instruction; a student must work at a different rate or different subject matter than the rest of the class. It can be used for such purposes with the assumption that the skills required will be equivalent to those which the student would have been required through conventional instruction.

Teachers and administrators of this vocational school must keep in mind what would be the most favorable strategies for the targeted students from the local area who will be enrolled in the nursing assistant program for a relative short period of time. By implementing some type of audio-visual aid, such as the sound-on-slide projector, as a tool of instruction along with other learning materials, this method will significantly assist students in achieving their competencies.

Evans:Evans (1980) conducted a project to demonstrate the effectiveness of competency-based, individualized instruction as a teaching technique in vocational welding programs for students with varying backgrounds, abilities, and special needs.

Five Missouri area vocational schools participated in the project by field testing and evaluating welding instructional modules developed by the Media Center and teacher in-service presentations developed during this project.

Two slide-tape presentations were produced, one to explain competency-based instruction and one to provide implementation procedures for teaching in a competency-based system. Three videotape programs were developed to show techniques for teaching learning disabled, educationally disadvantaged, and physically handicapped students in welding.

Major project findings included:

1. The teacher in-service presentation developed were found to be acceptable and ready for dissemination through the Media Center on a cost-recovery basis.
2. Positive results were obtained from the competency-based, individualized instructional method utilizing welding modules developed by the Media Center.

In the project, Evans:Evans noted that in order to prepare the student for a welding career, the teacher must accept the person where he or she is and use the

special teaching techniques to make certain the student understands the information required to become a proficient welder.

The investigators of the report highlighted some suggestions for providing special help for the educationally disadvantaged student which included:

1. One-to-one instruction will be required. When the teacher or teacher assistant cannot give enough individual help, other resource people need to be used.
2. Individualized instructional materials which present information in a visual audio format will be ideal for teaching students of special needs.
3. Textbook assignments can be read onto tape so the student can listen as he or she tries to read the text material.
4. Teacher should devise a testing method that will allow students to demonstrate or perform what they have learned.

The teaching techniques outlined in this paper by Evans:Evans can become a part of any type of individualized program. The individualized nursing program at the skill center, for example, will be able

to implement the aforementioned methods along with others into its program. By employing some of the highlighted techniques suggested by this report, teachers, and adminstrators can expect to see an overall, positive attitude in classroom activities and a decrease in student drop-out rate. Ultimately, the targeted students can become proficient nursing assistants and secure employment in this occupation.

Stone (1983) addresses the applicability of microcomputers to adult vocational training and presents guidelines for creating and evaluating software that specifically addresses adult learning needs.

Stone (1983) also points out that many adults enrolled in vocational programs are underprepared learners with the following characterisitics:

a. They lack basic conceptual and computational skills.

b. Their prior learning has been unsuccessful and ineffectual; therefore, they tend to approach learning with a low-risk taking and self-protective attitude.

c. They lack communication skills.

d. They tend to depend on an authority figure in learning situations.

e. They are not able to make judgements objectively.

> f. *Ayers, as cited by Stone (1983),* ...They have a passive and negative approach toward learning due to past failures.

The report notes that computers and computer software in the computer-assisted instruction mode (i.e. drill and practice, tutorial, and demonstration) can provide useful and timely instructional solutions to many of the learning needs of underpriviledged adult students. Learners find the instruction to be beneficial and less threatening, and they value its self-paced and individualized nature. Ayers: Garrison, as cited by Stone (1983),...In addition, use of software skills in the CAI (Computer-Assisted Instructions) mode can help students develop such cognitive skills as recall of information, imitation, discovery of correct answers, simple calculation, and grasp of elementary ideas and patterns (p.12).

Computers should play a significant role in any school's program and/or courses. Bee and Anthony (1984) state that the computer age is no longer dawning: it is here. All students should be provided the opportunity for some exposure, and it can be provided to some degree at most any age.

In regards to health care changes, Witmer (1989) points out that recent quantum leaps in instructional technology also challenge health occupation teachers. Student learning with the aid of computers, especially interactive video, become engrossed in their learning, in the areas that require higher level thinking. The writer further states that any health occupation teacher who lacks state-of-the-art technology skills is probably not teaching at an optimum level.

Individualized Programs

This report has indicated several strategies and/or teaching tools with a degree of positive results, such as: Team-Assisted Individualization (TAI), Applicability of Microcomputers, Personalized Individualized Vocational Occupation (PIVOT) materials and Competency-Based Individualized Instruction.

It is the strong belief of the author of this practicum that no particular program would be 100 percent effective in meeting the needs of low socio-economic adults who are returning to school. Much of the literature, however, is pinpointed toward programs which are individualized.

Regardless of the subject area (trade) or the school's location and/or environment, it is quite clear among vocational teachers that many adult students who have returned to school are often plagued by ongoing and lengthy health, personal and family problems. In essence, the adult learner often has to adjust and balance his/her education with other priorities. Also, data have been gathered through students' interviews (Fahy 1985) that many of these individuals (adult students) had encountered, as children or adolescents, bad experiences while attending the traditional or conventional type of schooling.

What is at issue, therefore, are the conditions that will best promote individual learning. Slavin (1984) suggests that for any kind of instruction to be optimally effective, four conditions must be satisfied:

(1) The instruction must be high in quality.

(2) The instruction must be appropriate to learners' instructional levels.

(3) The students must be adequately motivated to work on the instructional tasks.

(4) The students must have adequate time to learn.

Also, the question must be asked: What type of program will best entice adults to return to school? It is quite clear from research materials that many adult learners do not seek the traditional setting in education. The alternative is some type of individualized educational program. Strother (1985) clearly points out that individualized instruction is one way to meet diverse needs. Taught at an appropriate level, students with learning problems have opportunities to achieve success. Meanwhile, able students can move rapidly through the material.

Defining this individualized education or instruction is an undertaking which most authors ignore, presumably because they feel it is unnecessary. It is obvious, however, that there are perceived differences in interpretation, judging from the different ways in which it is used (Winter 1985). For example, Leamon, as quoted by Winter (1985, p.1) states that:

> To some the concept of individualized education denotes a philosophy. To some the term means a method, a technique, or an approach. To others the word refers to an attitude toward learning or toward people or both. Or perhaps, in the unforgetable terminology of the objective-type quiz, we could add: <u>All of the above</u>: <u>None of the above</u>.

For the purpose of this practicum, the term "individualized education or instruction" implies, in the broad sense, meeting the individual learner's needs--regardless of what form the "adaptation" of the learning may take place. When the idea of individualized education is defined in this very general sense, Winter added that it is for all practical purposes (short of finely-tuned philosophical differences) synonymous with the more recently popularized term adaptive instruction or adaptive education. As noted by Johnson and Johnson (1985)

> Adaptive instruction may be defined as the use of alternative instructional strategies and school resources to provide learning experiences that meet the needs of individual students (p.105).

Adaptive instruction, as well as the broadest interpretation of the term "individualized instruction," refers to instruction that effectively accommodates differences in the learning characteristics and needs of individual students...(Wong & Walberg 1985 ).

Somewhere in the middle of the continuum, one finds an historically accepted definition of individualized instruction (one which is still applied

today) as specially designed programs of instruction with which students interact on an individual basis.

However, whichever definition of individualized education is used, all definitions include common characteristics. Following is Dunn's list, as quoted by Winter (1985, p.8), of factors that must be considered in the individualization of educational programs.

1. What the student needs to learn.
2. What the student would like to learn.
3. What the student already knows.
4. The rate at which the selected content should be presented.
5. The sequence in which that content should be presented.
6. The mode of presentation of that content.
7. The amount, type, and schedule of feedback associated with the presentation.
8. The difficulty level of the learning materials used to teach the content.
9. The amount of teacher supervision--media richness-technology involved.

## Solution Strategy

### Open-Entry/Open-Exit Competency Based

After reviewing relevant literature based on adult students in traditional as well as individualized programs, the author of this practicum concludes that an open-entry/open-exit competency-based individualized nursing assistant program would best serve the needs of the targeted students. Presently the nursing assistant program at this school is being taught in a traditional setting.

A competency-based vocational education program evolves around the adult student's strengths, needs, and learning style. It is a very personalized system that has the following characteristics:

1. Open-entry and open-exit
2. Variable learning time
3. Credit granted for work completed
4. Evaluation (grades) based on performance
5. Fixed content

Classes are offered according to student demand, and may go on continuously all year. The classroom vacancy that occurs when a student exits from the program may be filled immediately by another student waiting to begin. In a traditional setting, students

would have to start classes in September or January or, at least, some other set time.

The time it takes to complete a program varies. If one knows the material and can pass a pretest, the student may proceed to new material in the program. As stated, the individual can learn and move forward at one's own individual pace. The performance or evaluation is always based on predetermined and stated standards of performance. If the skill center could implement a competency-based vocational system in its Nursing Assistant Program, ranging for a relative short period of time (approximately sixteen to twenty weeks or 330 Standard Hours), the program as well as the school will see an enrollment increase by at least 80 percent due to this course design.

The health instructors, with the help of the author and others, have put together learning guides that will be considered essential for a potential student to be able to perform in an entry-level position in this field. The learning guides are instructional packets that will guide each student individually through the learning process to attain the tasks. With students entering the program at different times, traditional teaching methods would be

inefficient and impractical. The learning guide is an alternative to the teacher lecturing the class. Mainly, it would allow the student to work on different tasks and free the instructor to move around the room and give attention where it is needed.

An open-entry/open-exit competency-based program would be the preferred strategy due to two main factors:

1. The effectiveness of such a program on the targeted students.
2. The time, cost and material involved.

Basically by implementing this type of program, there is agreement by the nursing instructors, principal, assistant principal, registrar, head counselor and the author of this paper that more adult students could be reached. Ultimately, the school enrollment would be increased as well as a decrease in the drop-out rate of adult students. Also significant is this type of program would allow adult students who are at different comprehension levels to be exposed to and/or utilize a variety of resource materials in order to achieve the required competencies. Again, the main goal of an individualized competency-based program is to meet the needs of each student. The effectiveness

of such a program could be observed as an obtainable and effective strategy.

Since the traditional-type nursing program is already in place, the time, cost and materials needed in order to operate an open-entry/open-exit individualized nursing assistant program is very nominal. The skill center has a nursing facility as well as nursing instructors (two full time and one part time), and resource materials (textbooks, audio-visual equipment, film strips, cassettes, etc.). With the exception of providing students with learning guides, which have now been developed, this program would be the appropriate strategy under the present circumstances. Mills, as quoted by Wilkie (1979), maintains through competency-based vocational instruction students will receive instruction only in those competencies required for the occupation in which he/she is being trained. This would result in effective and efficient use of time, material and human resources.

## Chapter III

## METHOD

The implementation stage of this practicum report began on June 4, 1990, with a student population of twenty students. However, fifteen of these students had already started their nursing assistant training six weeks ago under the school's traditional nursing assistant program. Prior to implementation of the open-entry/open-exit competency based individualized nursing assistant program, the adult pupils were told several weeks ago informally by the nursing instructor of pending changes regarding the instructional strategy. At the same time, the school had eleven students on a "waiting" list for the next trimester which would start in September 1990. The prospective students were contacted by the school's head counselor regarding available slots which had opened due to the skill center's new open-entry/open-exit nursing assistant policy. Five of the eleven students responded. Methodically, if the new students had not registered at the very beginning of a trimester, the nursing assistant program would have put prospective students on a "waiting" list for the next term. This procedure resulted in losing potential clients from the nursing

program for a variety of reasons as discussed earlier in the report.

After consulting with vocational nursing instructors in this school district as well as others in various counties who have already implemented some type of individualized program, the skill center's nursing instructors and the writer of this practicum have assembled learning guides for the prospective target students as well as those who are currently enrolled. These learning guides are self-instructional packets for tasks identified as essential for performance on entry-level employment as nursing assistants.

Tasks and Duties

What is a task? In regards to the nursing assistant program, it is the skills and knowledge that one is expected to attain. Some tasks, for example, are actual skills like "prepare a food plan" or "bathe the adult." Others are units of knowledge such as "identify the nursing care needs of the adult" or "define medical terminology." Nevertheless, a list of tasks has been put together by the nursing instructors that are considered to be essential for a nursing student to be able to perform in an entry-level

position in this field. This list is called a program task listing. A program task listing has been prepared that spells out clearly and precisely the tasks for prospective clients and students in this program.

The task listing is broken down into major units called duties (Appendix C:49). Each duty has a letter to identify it and each task has a number 01-99 to identify it within the duty. Also notice that beside each task on the task listing is a number under the hours heading. This number indicates the average number of hours (also referred to as standard hours) it takes a student to attain the task. The adult student may take more or less time if he/she wishes. Standard hours are not clock hours of attendance but rather are meant to give one a "ball-park" estimate of how much time one might expect to spend learning a particular task. Standard hours also have a second function in this type of program. After a student has attained competency in a task and has passed the performance test, the standard hours assigned to the task are used in determining a student grade.

Learning Guide

A Student Learning Guide is a well-defined set of instructions designed to help students manage their own

learning to attain a task. One Student Learning Guide is written for each task on the task listing.

A Student Learning Guide consists of three parts. The first enabling objectives provide knowledge needed to perform the task; the following enabling objectives give activities which enable the learner to practice the task; the last part of the Student Learning Guide is the performance test which assesses the learner's attainment of the task.

Parts of a Learning Guide

(A) Cover Page - This page identifies the task and tells the student why it is important for the individual to learn this task.

(B) Objectives Page - This page contains the performance objectives and the enabling objectives. The performance objective tells the student what he/she will do, what resources one will use, and how well the individual must perform the task. The enabling objectives break the task down into smaller segments. The knowledge is presented first, the second allows the practice opportunity and the third is the evaluation.

(C) Learning Activities Page - This page gives the student specific directions on what to do and when. The resource column lists what one will need to complete the task. These include books, pamphlets, audiovisual materials, etc. A learning activities page is used for each enabling objective.

(D) Instruction Sheet - This page provides the adult student with readily accessible information. Usually the instructor will refer a text or other reference material to the student. However, in some cases, it may be necessary to combine several sources in order to provide the individual with the most up-to-date information.

(E) Self-Check - This is a means of giving a student a chance to check the knowledge or skill one should have attained by completing the learning activities. The result of the Self-Check are not recorded. Two types of Self-Checks are used. One type is composed of multiple-choice, true-false, matching, essay questions, etc. to assess knowledge. The other type is a skill Self-Check used to

assess performance and may sometimes require an instructor's verification.

(F) Knowledge Test - This instrument is used to determine whether or not the student has learned certain information or facts required to perform a task correctly and safely. At a certain point in the learning guide, one will be directed to take the Knowledge Test if he/she feels one is ready. When one is ready, he/she sees the instructor.

(G) Performance Test - This instrument is used to determine whether or not the individual has attained the skill to perform a task correctly and safely. At a certain point in the learning guide, one will be directed to take the Performance Test if one feels that he/she is ready. When the student is ready, the person sees the instructor.

Students were introduced to the task listing. Detailed instructions on how to use the Student Learning Guide were also given.

The Instructor's/Author's Role

In this type of open-entry/open-exit individualized competency-based vocational program, the nursing instructors assumed a different role from the traditional setting. Basically, the instructor acted as the tutor, counselor, diagnostician, and/or prescription writer. The nursing instructors (two full time and one part time) worked with students individually and guided them through the learning process with the aid of many different resources. If the student was having difficulty, he/she would go to the instructor with the problem. The instructor's goal was to find the most effective way to help the adult student learn the tasks in the nursing assistant program.

The author's role was to monitor all aspects of this open-entry/open-exit competency-based individualized nursing assistant program during this 10-week period. The author gave aid to instructors in the following areas:

1. Acted as resource person in clarifying any confusion that the instructors had in interpreting the learning guides.

2. Met with the instructors in a timely fashion to discuss pros and cons of the program.
3. Assisted the instructors in making adjustments that were warranted during the implementation.
4. Collected weekly data concerning the following:
   a. enrollment
   b. progress towards completion
   c. attitude of students toward new material (observation)
   d. monitored the stress levels of the instructors due to teaching different activities to different students at the same time.

## Chapter IV

## RESULTS

Throughout the ten-week period of implementation of the Open-entry/Open-exit Competency-Based Individualized Nursing Assistant Program at this skill center, the writer collected all required and pertinent data which validated its operational success. After all necessary records had been compiled, the practicum's author submitted the findings to the school administrators, nursing instructors, registrar and counselor who then evaluated the success of this program in its nursing department at this vocational school. The key factors/criteria which determined and/or demonstrated the success of this program were:

1. The percentage increase in enrollees (by comparing class attendance sheets prior to implementation of the program and at the end of the implementation period).
2. The percentage decrease in student drop-out rate (by providing evaluator's random-samplings documentation, i.e. anecdotal records of targeted students; also, monthly drop-out rate figures during the pre and post implementation of the program).

3. The percentage increase of program completers (by comparing records of the traditional program completers to the competency-based program completers).

Table II

NURSING ASSISTANT PROGRAM
MONTHLY ATTENDANCE RECORDS

| MONTHS (1990) | ENROLLES | |
|---|---|---|
| JANUARY | 20 | |
| FEBRUARY | 18 | Traditional |
| MARCH | 10 | |
| APRIL | 10 | |
| MAY | 15 | (Transitional Period) |
| JUNE | 20 | Competency-Based |
| JULY | 26 | |
| AUGUST | 35 | |

Class attendance data from the nursing assistant program covering a three-month span (February - April 1990) as indicated by Table II were collected prior to implementation of the open-entry/open-exit competency-based program. Also, attendance data covering the three-month period after implementation of

the new program (June - August 1990) were collected. In comparing the two periods, traditional versus competency-based open-entry/open-exit, the latter showed a substantial increase in enrollment by at least 107 percent. The enrollment during the three-month period in the traditional program did not increase. In fact, the enrollment decreased by 44 percent.

The second objective of the new program strategy was to reduce the drop-out rate significantly. In reviewing the collected data (attendance sheets) covering periods February through April 1990 (traditional program) versus June through August (competency-based open-entry/open-exit program), the information which was gathered clearly illustrated over the three-month span in the traditional program almost half of the student population dropped out of the program (44 percent). However, in the new implemented program, there were no drop-outs--in fact, enrollment increased.

The major factor which contributed to a low and/or no drop-out rate in the "new" program was due to an overall positive, attitudinal change by the targeted students regarding the classroom activities.

The author of this practicum spoke to ten students on a one-to-one basis at various times during the implementation stage to find out whether or not they were satisfied or dissatisfied with the new instructional approach (competency-based). All ten students responded in a very positive manner. The main points cited by the adult pupils were:

--exposure to a wide variety of learning activities, i.e., visual aids, computers, etc.

--some control over what was learned.

--can move at one's own pace.

The third objective of this final report, which has to do with increasing the graduation rate, was achieved quite successfully. The counselor's records at the skill center indicated that there were 10 completers in December 1989, and 8 completers in April 1990. At the end of the implementation stage of the practicum, however, there were 15 adult pupils who had completed all of the required competencies. The competency-based open-entry/open-exit program, in other words, increased the graduation rate in the nursing assistant program by 87.5 percent as compared to the previous traditional program. Also, it was evident to all concerned parties that the "no" drop-out rate,

and the positive atttitudinal change among the targeted students in classroom assignments were the contributing factors in the increase of nursing assistant completers.

The author of this practicum and the nursing instructors discussed various matters relating to the effectiveness of this open-entry/open-exit competency-based program. At the beginning of the report, as was pointed out, the targeted students whose educational background was very limited had to be provided and/or exposed to more visual material to help them acquire all the needed competencies in the nursing assistant program. Also, the writer observed that the instructor was able to give more individualized attention to those students who were considered to be slow learners as well as those who were having problems with various other activities.

Based on the above criteria along with random observation, one saw at the end of the testing period (ten weeks) an attitudinal and motivational change and a decline in the drop-out rate of the nursing assistant students as a result of the implementation of the program.

## Chapter V.

## RECOMMENDATIONS

This model of Open-Entry/Open-Exit Competency-Based Individualized Nursing Assistant Program can be utilized in all adult, vocational and skill centers. Many unskilled and uneducated adult students who have and/or plan to return to school to learn a skill need to be in an open-entry/open-exit competency-based program. This type of program will allow students to move at their own pace, to obtain needed competencies, and to move eventually into the world of work as skilled individuals.

All concerned parties (school administrators, nursing staff, registrar, counselor and author of this practicum) have concurred upon the successful completion of this project coupled with positive feedback from the staff that the Open-Entry/Open-Exit Competency-Based Individualized Nursing Assistant Program will be implemented as a permanent program at this facility. Also, it has been agreed by the school administrators that all "new" courses will be taught similarly to this program outlined in the author's practicum.

REFERENCE LIST

Evans, Shirley J., Evans, Gerald. "A Project to Initiate a Competency-Based Welding Program in Five Missouri Area Vocational Schools for Students with Special Needs and Varying Abilities. Final Report." State Fair Community Coll., Sedalla, MO, 1980, ERIC ED 194 703.

Frazier, Ross, Jr. "PIVOT Research II. Final Report." Philadelphia Public Schools, PA, 1979, ERIC ED 182 520.

Han, Andrew. "Reaching Out to America's Dropouts: What to do?" Phi Delta Kappan, December 1987, pp. 256-263.

Johnson, D. W., & Johnson, R. T. "Cooperative Learning and Adaptive Education." In M. C. Wong and N. J. Welberg (Editors), Adapting instruction to individual differences. Berkeley, CA: McCutchan Publishing Corp., 1985.

Stone, Antonia. "Microcomputer Software for Adult Vocational Education: Guidelines for Evaluation. Information Series No. 261." ERIC Clearinghouse on Adult, Career, and Vocational Education, Columbus, OH, 1983, ERIC ED 232 063.

Strother, Deborah Burnett. "Adapting Instruction to Individual Needs: An Eclectic Approach." Phi Delta Kappan, December 1985, pp. 308-311.

Wilkie, Barbara J. "An Analysis of Open-Entry/Open-Exit Systems of Individualized Competency-Based Vocational Instruction for High School Students Within Selected Florida School Districts. Final Report, April 5, 1978 - September 30, 1979." Saint John County Board of Public Instruction, St. Augustine, FL, 1979, ERIC ED 200 736.

Winter, Jill S. "An Examination of Individualized Instruction." ERIC Clearinghouse on Handicapped and Gifted Children, Boston, VA, 1985, ERIC ED 263 720.

Wircenski, Jerry L. "Strategies to the Advantage of Disadvantaged Adults," Vocational Education Journal, April 1989, pp. 33-35.

Wong, M. C. & Welberg, N. J. (Editors). Adapting instruction to individual differences. Berkeley, CA: McCutchan Publishing Corp., 1985.

Appendices

Appendix A

Figure 1

Nursing Assistant Program--Dropout Rate
Covering the school's fiscal years
1987-1988, 1988-1989, 1989-1990

# Appendix B

## Table 1

PERCENTAGE CHANGE IN DROPOUT RATE FOR EACH TRADE.

| | FISCAL YEAR | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1987-88 | | CHANCE | 1988-89 | | CHANGE | 1989-90 | | CHANGE |
| | NO. OF STUDENTS | | IN DROPOUT | NO. OF STUDENTS | | IN DROPOUT | NO. OF STUDENTS | | IN DROPOUT |
| TRADE | START | END | RATE | START | END | RATE | START | END | RATE |
| WELDING | 30 | 21 | 30.0% | 35 | 27 | 22.8% | 32 | 25 | 21.9% |
| OFFICE PROCEDURES | 42 | 32 | 23.8% | 39 | 31 | 20.5% | 40 | 32 | 20% |
| NURSE ASSISTANT | 45 | 30 | 33.3% | 38 | 25 | 34.2% | 45 | 28 | 37.8% |
| AUTO MECHANICS | 25 | 19 | 24% | 28 | 22 | 21.4% | 30 | 22 | 26.7% |
| BUILDING MAINTENANCE | 22 | 15 | 31.8% | 24 | 18 | 25.0% | 24 | 17 | 29.2% |
| DATA ENTRY | 41 | 31 | 24.4% | 36 | 25 | 30.6% | 42 | 32 | 23.8% |
| WORD PROCESSING | 36 | 27 | 25.0% | 42 | 33 | 21.4% | 45 | 35 | 22.2% |

NOTE: PERCENTAGES HAVE BEEN ROUNDED OFF TO THE NEAREST TENTH.

THE TABLE SHOWS THAT THE DROPOUT RATE FOR THE NURSE ASSISTANT CLASS HAS INCREASED CONSIDERABLY SINCE THE BEGINNING OF THE TRADITIONAL PROGRAM. SPECIFICALLY, THE DROPOUT RATE WENT UP FROM 33.3% IN FISCAL 1987-88 TO 37.8% IN FISCAL 1989-90. HOWEVER, THE OTHER TRADES SHOW A LOWER DROPOUT RATE OVER THE SAME TIME PERIOD.

TASK LISTING:

| TASK | HOURS | DUTY/TASK |
|---|---|---|
| OE | 5 | COMPLETING ORIENTATION |
| 01 | 3 | Complete Orientation to CBVE |
| 02 | 2 | Complete Orientation to School policies |
| A | 5 | ORIENTING TO THE HEALTH CARE PROGRAM |
| 01 | 1 | Recognize the preparation needed to become a Geriatric Aide |
| 02 | 1 | Recognize the preparation needed to become a Home Health Aide |
| 03 | 1 | Recognize the preparation needed to become a Nurse Aide |
| 04 | 2 | Define Medical terminology |
| B | 23 | PROVIDING A SAFE ENVIRONMENT |
| 01 | 5 | Meet the clients' need for safety |
| 02 | 15 | Meet the clients' ambulatory needs |
| 03 | 3 | Prevent the spread of disease |
| C | 34 | ASSESSING THE NEEDS OF CLIENTS |
| 01 | 5 | Identify the nursing care needs of the child |
| 02 | 5 | Identify the nursing care needs of the adolescent |
| 03 | 12 | Identify the nursing care needs of the adult |
| 04 | 12 | Identify the nursing care needs of the elderly |
| D | 16 | PROVIDING PERSONAL CARE AND HYGIENE |
| 01 | 5 | Make beds |
| 02 | 2 | Implement preventive measure techniques |
| 03 | 2 | Bathe the adult |
| 04 | 5 | Bathe the infant |
| 05 | 2 | Give personal care |
| E | 20 | MEETING THE NUTRITIONAL NEEDS |
| 01 | 10 | Prepare a food plan |
| 02 | 5 | Prepare a diet plan |
| 03 | 5 | Feed the Client |

Appendix C

| TASK | HOURS | DUTY/TASK |
|---|---|---|
| F | 14 | MEETING THE ELIMINATION NEEDS |
| 01 | 6 | Provide for the clients' elimination needs |
| 02 | 2 | Give colostomy care |
| 03 | 2 | Give and enema |
| 04 | 4 | Observe, measure and report fluid intake and output |
| G | 63 | PERFORMING HOME HEALTH AIDE PROCEDURES |
| 01 | 5 | Take and record temperature, pulse, and respiration (T.P.R.) |
| 02 | 10 | Take and record blood pressure (B.P.) |
| 03 | 2 | Change unsterle dressings |
| 04 | 3 | Apply cold and warm applications |
| 05 | 2 | Apply support stockings and prosthetic devices |
| 06 | 5 | Give post-partum care |
| 07 | 3 | Collect speciments |
| 08 | 5 | Perform sugar and acetone tests |
| 09 | 3 | Care for catheters, tubes, and tubings |
| 10 | 5 | Assist client with taking self-administered prescribed medications |
| 11 | 10 | Assist with meeting rehabilitation needs |
| 12 | 5 | Perform cardiopulmonary resuscitation (CPR) |
| 13 | 5 | Perform first aide |
| H | 3 | PERFORMING HOMEMAKER SKILLS |
| 01 | 2 | Demonstrate home management |
| 02 | 1 | Demonstrate light housekeeping |

| TASK | HOURS | DUTY/TASK |
|---|---|---|
| I | 18 | PERFORMING NURSE AIDE PROCEDURES |
| 01 | 2 | Admit, transfer and discharge clients |
| 02 | 5 | Practice isolation techniques |
| 03 | 3 | Assist with physical examination |
| 04 | 3 | Perform pre-op and post-op care |
| 05 | 5 | Assist with dying patient |
| J | 4 | DEVELOPING JOB KEEPING SKILLS |
| 01 | 1 | Conduct a job search |
| 02 | 1 | Apply for a job |
| 03 | 1 | Interview for a job |
| 04 | 1 | Write a resume |
| K | 25 | PERFORMING PROCEDURES IN THE PRIVATE HOME |
| 01 | 25 | Perform private home clinical experience |
| L | 25 | PERFORMING PRECEDURES IN THE NURSING HOME |
| 01 | 5 | Orient to the facility |
| 02 | 20 | Perform geriatric clinical experience |
| M | 75 | PERFORMING PRECEDURES IN THE HOSPITAL |
| 01 | 5 | Orient to the facility |
| 02 | 70 | Perform hospital clinical experience |

ERIC Clearinghouse for Junior Colleges FEB 08 1991